

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: GUSTIN POND	Lake Area (ha):	4.49
Town: MARLOW	Maximum depth (m):	6.3
County: Cheshire	Mean depth (m):	3.2
River Basin: Connecticut	Volume (m ³):	144000
Latitude: 43°08'49" N	Relative depth:	2.7
Longitude: 72°14'44" W	Shore configuration:	1.07
Elevation (ft): 1290	Areal water load (m/yr):	3.68
Shore length (m): 800	Flushing rate (yr ⁻¹):	1.10
Watershed area (ha): 32.7	P retention coeff.:	0.71
% watershed ponded: 0.0	Lake type:	natural

BIOLOGICAL:

3 February 1997

24 July 1996

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 90%	CHRYSOSPHAERELLA 25%
	#2		MALLOMONAS 22%
	#3		CERATIUM/DINOBRYON 20%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			14.04
DOM. ZOOPLANKTON (% TOTAL)	#1	CYCLOPOID COPEPOD 43%	POLYARTHRA 40%
	#2	KERATELLA 26%	NAUPLIUS LARVA 40%
	#3		
ROTIFERS/LITER		8	36
MICROCRUSTACEA/LITER		12	32
ZOOPLANKTON ABUNDANCE (#/L)		23	68
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.4
BOTTOM DISSOLVED OXYGEN (mg/L)		3.5	0.2
BACTERIA (E. coli, #/100 ml)	#1		7
	#2		3
	#3		

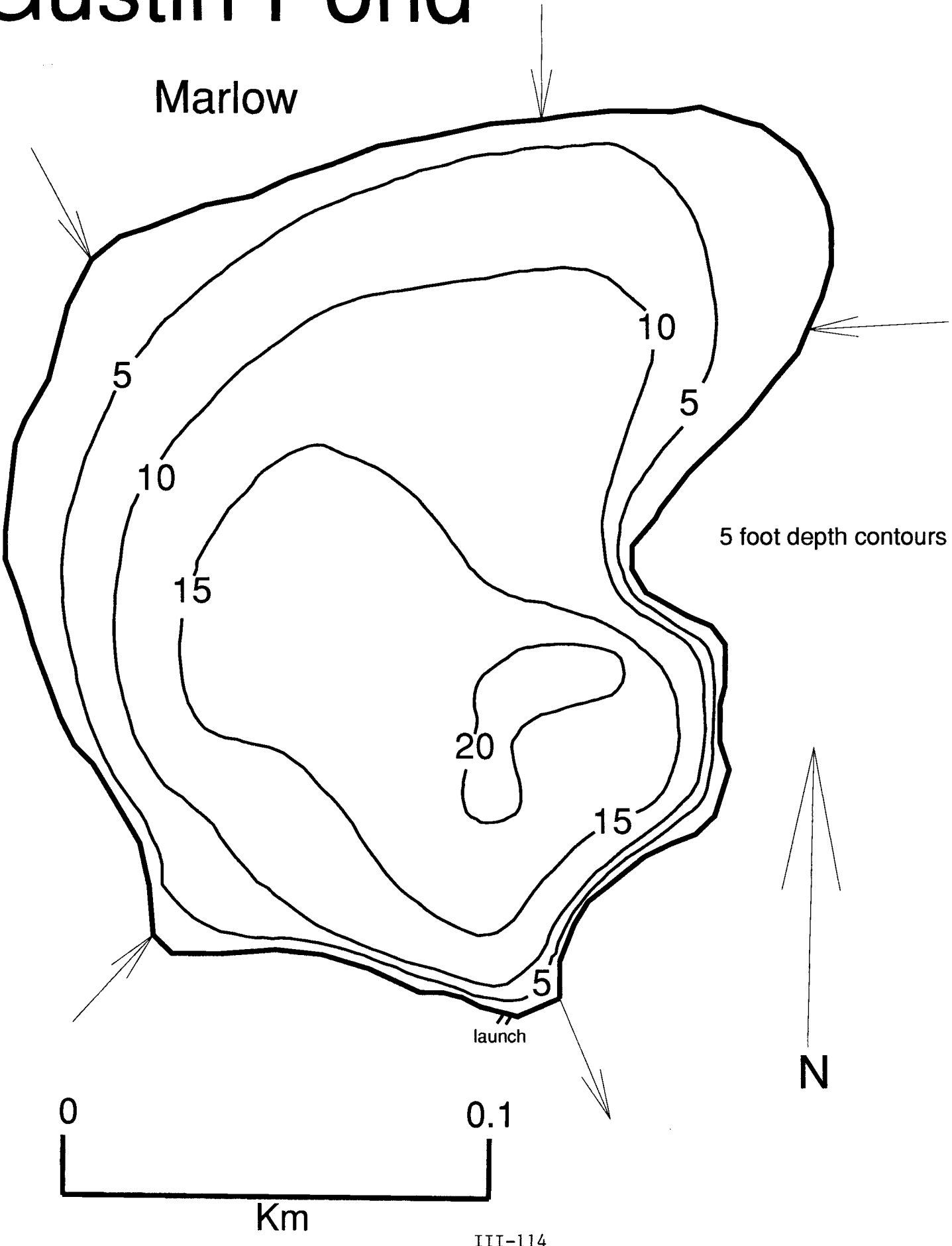
SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	2.9
Hypolimnion volume (m ³):	9300
Anoxic volume (m ³):	42700

CHEMICAL:		Lake: GUSTIN POND Town: MARLOW				
	3 February 1997		24 July 1996			
DEPTH (m)	2.0	4.0	1.5	3.0	5.5	
pH (units)	5.7	5.6	6.2	5.6	5.8	
A.N.C. (Alkalinity)	2.5	3.0	3.1	2.8	6.6	
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05	
TOTAL KJELDAHL NITROGEN	0.32	0.36	0.17	0.14	0.38	
TOTAL PHOSPHORUS	0.011	0.085	0.017	0.014	0.050	
CONDUCTIVITY (µmhos/cm)	29.7	29.8	24.2	26.5	34.3	
APPARENT COLOR (cpu)	42	42	110	100	150	
MAGNESIUM			0.51			
CALCIUM			1.6			
SODIUM			1.2			
POTASSIUM			0.64			
CHLORIDE	< 2	< 2	2		2	
SULFATE	5	5	4		4	
TN : TP	29	4	10		8	
CALCITE SATURATION INDEX			4.4			
All results in mg/L unless indicated otherwise						
TROPHIC CLASSIFICATION: 1996						
	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	4	3	3	3	13	Eutro.
COMMENTS:						
1. AKA Mirror Lake.						
2. Gustin Pond is a dark tea-colored, moderately acidic, eutrophic pond.						
3. No dissolved oxygen was present below the thermocline.						
4. Three dwellings were located along the western shoreline.						
5. The phytoplankton was dominated by chrysophytes and dinoflagellates, typical of tea-colored ponds.						

Gustin Pond



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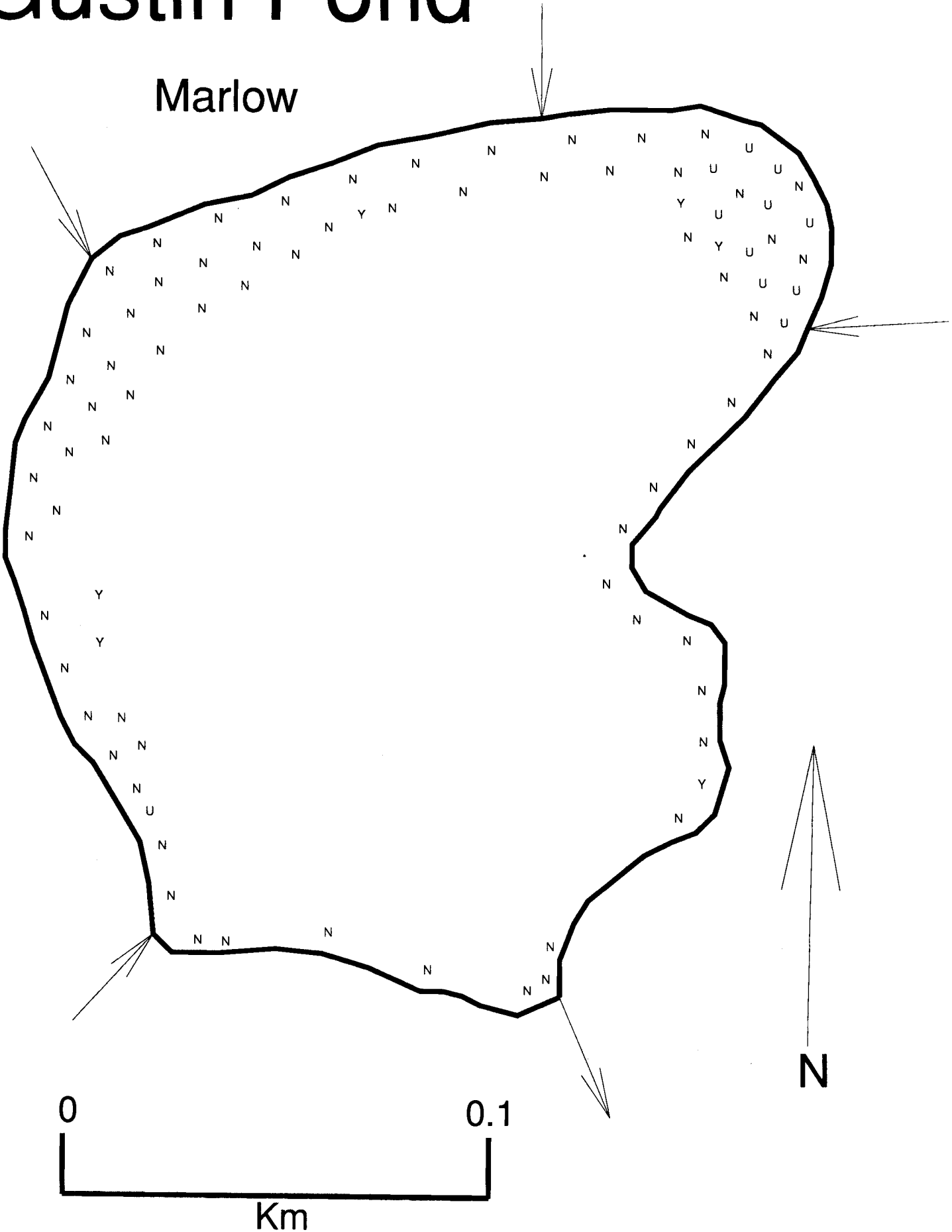
TOWN: MARLOW
WEATHER: OVERCAST, HAZY, 80'S (F)

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COMMENTS :

*Dissolved oxygen values are in mg/L

Gustin Pond



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